

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. **(Currently amended)** A method for treating a disorder in which TNF $\alpha$  activity is detrimental comprising administering to a subject an effective amount of ~~an~~ a human anti-TNF $\alpha$  antibody, or an antigen-binding portion thereof, in a low dose of 0.01 – 0.1 mg/kg, such that the disorder is treated.
2. **(Original)** The method of claim 1, wherein the disorder is arthritis.
3. **(Original)** The method of claim 2, wherein the disorder is rheumatoid arthritis.
4. **(Previously presentaed)** The method of any one of claims 2 or 3, wherein symptoms selected from the group consisting of bone erosion, cartilage erosion, inflammation, and vascularity, are treated.
- 5-7. **(Canceled)**
8. **(Currently amended)** A low dose method ~~to alleviate~~ for alleviating symptoms associated with a disorder in which TNF $\alpha$  activity is detrimental, comprising administering a low dose of 0.01 – 0.1 mg/kg of ~~an~~ a human anti-TNF $\alpha$  antibody, or an antigen-binding portion thereof, to a subject suffering from said disorder, such that the symptoms are alleviated ~~treated~~.
9. **(Original)** The method of claim 8, wherein the disorder is arthritis.
10. **(Original)** The method of claim 9, wherein the disorder is rheumatoid arthritis.
11. **(Previously presented)** The method of any one of claims 9 or 10, wherein symptoms are selected from the group consisting of bone erosion, cartilage erosion, inflammation, and vascularity.
- 12-14. **(Canceled)**

15. **(Previously presented)** A method for treating arthritis comprising administering to a subject an effective amount of an anti-TNF $\alpha$  antibody, or an antigen-binding portion thereof, in a low dose of 0.01 – 0.1 mg/kg, such that the arthritis is treated.

16. **(Original)** The method of claim 15, wherein the arthritis is rheumatoid arthritis.

17. **(Previously presented)** The method of any one of claims 15 or 16, wherein arthritis is treated by alleviating symptoms selected from the group consisting of bone erosion, cartilage erosion, inflammation, and vascularity.

18-20. **(Canceled)**

21. **(Currently amended)** A low dose method for ~~treating~~ alleviating symptoms associated with arthritis comprising administering to a subject an effective amount of an anti-TNF $\alpha$  antibody, or an antigen-binding portion thereof, in a low dose of 0.01 – 0.1 mg/kg, such that the symptoms are alleviated.

22. **(Previously presented)** The method of claim 21, wherein the arthritis is rheumatoid arthritis.

23. **(Previously presented)** The method of any one of claims 21 or 22, wherein the symptoms are selected from the group consisting of bone erosion, cartilage erosion, inflammation, and vascularity.

24. **(Original)** The method of claim 23, wherein the symptoms are further selected from the group consisting of joint distortion, swelling, joint deformation, ankylosis on flexion, and severely impaired movement.

25-27. **(Canceled)**

28. **(Currently amended)** A method of sequestering TNF $\alpha$  into complexes in a subject suffering from a disorder in which TNF $\alpha$  activity is detrimental, by administering a low dose of 0.01 – 0.1 mg/kg of ~~an~~ a human anti-TNF $\alpha$  antibody, or an antigen-binding portion thereof, to the subject, such that TNF $\alpha$  is sequestered into complexes.

29. **(Original)** The method of claim 28, wherein the serum level of TNF $\alpha$  is higher than the serum level of TNF $\alpha$  in a subject not suffering from a disorder in which TNF $\alpha$  activity is detrimental.

30. **(Canceled)**

31. **(Previously presented)** The method of any one of claims 1, 8, or 15, wherein the anti-TNF $\alpha$  antibody, or an antigen-binding portion thereof, is administered with an additional therapeutic agent.

32. **(Currently amended)** The method of any one of claims 1-3, wherein the human anti-TNF $\alpha$  antibody, or an antigen-binding portion thereof, is ~~either infliximab or~~ D2E7.

33. **(Currently amended)** The method of any one of claims 8-10, wherein the human anti-TNF $\alpha$  antibody, or an antigen-binding portion thereof, is ~~either infliximab or~~ D2E7.

34. **(Previously presented)** The method of any one of claims 15 or 16, wherein the anti-TNF $\alpha$  antibody, or an antigen-binding portion thereof, is either infliximab or D2E7.

35. **(Previously presented)** The method of any one of claims 21 or 22, wherein the anti-TNF $\alpha$  antibody, or an antigen-binding portion thereof, is either infliximab or D2E7.

36. **(Currently amended)** The method of claim 28, wherein the human anti-TNF $\alpha$  antibody, or an antigen-binding portion thereof, is ~~either infliximab or~~ D2E7.

37-39. **(Canceled)**

40. **(Currently amended)** The method of any one of claims ~~1-3, 8-10,~~ 15, 16, 21 or 22, wherein the anti-TNF $\alpha$  antibody, or an antigen-binding portion thereof, is human.

41. **(Previously presented)** The method of claim 40, wherein the anti-TNF $\alpha$  antibody, or antigen-binding portion thereof, dissociates from human TNF $\alpha$  with a  $K_d$  of  $1 \times 10^{-8}$  M or less and a  $K_{off}$  rate constant of  $1 \times 10^{-3}$  s $^{-1}$  or less, both determined by surface plasmon resonance, and neutralizes human TNF $\alpha$  cytotoxicity in a standard *in vitro* L929 assay with an IC $_{50}$  of  $1 \times 10^{-7}$  M or less.

42. **(Currently amended)** A low dose method for treating rheumatoid arthritis ~~in which TNF $\alpha$  activity is detrimental~~ comprising administering to a subject a low dose of 0.01 – 0.1 mg/kg of a human TNF $\alpha$  antibody, or an antigen-binding portion thereof, such that the ~~disorder~~ rheumatoid arthritis is treated.
43. **(Currently amended)** The method of claim ~~36~~ 42, wherein rheumatoid arthritis is treated by alleviating symptoms selected from the group consisting of bone erosion, cartilage erosion, inflammation, and vascularity, are treated.
44. **(Currently amended)** The method of claim ~~36~~ 42, wherein the human anti-TNF $\alpha$  antibody, or antigen-binding portion thereof, dissociates from human TNF $\alpha$  with a  $K_d$  of  $1 \times 10^{-8}$  M or less and a  $K_{off}$  rate constant of  $1 \times 10^{-3} \text{ s}^{-1}$  or less, both determined by surface plasmon resonance, and neutralizes human TNF $\alpha$  cytotoxicity in a standard *in vitro* L929 assay with an  $IC_{50}$  of  $1 \times 10^{-7}$  M or less.
45. **(Currently amended)** The method of claim ~~36~~ 44, wherein the anti-TNF $\alpha$  antibody, or antigen-binding portion thereof, is D2E7.
- 46-47. **(Canceled)**
48. **(Previously presented)** A low dose method of improving symptoms in the joints of a subject having arthritis comprising administering to the subject a low dose of 0.01-0.1 mg/kg of a human anti-TNF $\alpha$  antibody, or antigen-binding portion thereof, such that at least one symptom selected from the group consisting of inflammation, cartilage erosion, bone erosion, and vascularity is improved.
49. **(Currently amended)** The method of claim ~~44~~ 48, wherein the human anti-TNF $\alpha$  antibody, or antigen-binding portion thereof, is D2E7.
50. **(New)** A method for treating a disorder in which TNF $\alpha$  activity is detrimental, wherein the disorder is selected from the group consisting of an autoimmune disease, infectious disease, transplant rejection, malignancy, pulmonary disorder, intestinal disorder, cardiovascular disorder, metabolic disease, liver disease, kidney disease, inflammatory disease, disorders associated with degenerative bone and joint disease, and disorders associated with reperfusion injury, comprising administering to a subject an effective amount of a human anti-TNF $\alpha$  antibody in a low dose of 0.01 – 0.1 mg/kg, such that the disorder is treated.

51. (New) A low dose method for alleviating symptoms associated with a disorder in which  $\text{TNF}\alpha$  activity is detrimental, wherein the disorder is selected from the group consisting of an autoimmune disease, infectious disease, transplant rejection, malignancy, pulmonary disorder, intestinal disorder, cardiovascular disorder, metabolic disease, liver disease, kidney disease, inflammatory disease, degenerative bone and joint disease, and disorders associated with reperfusion injury, comprising administering a low dose of 0.01 – 0.1 mg/kg of a human anti- $\text{TNF}\alpha$  antibody to a subject suffering from said disorder, such that the symptoms are alleviated.